

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

## ACCEPTED MANUSCRIPT

(for published version see: Oliver, J., Smith, P., Leigh, E. (2015). ‘All these negative thoughts come flooding in’: How young people with depression describe their experience of rumination. *The Cognitive Behaviour Therapist*, 8, e15.

doi: 10.1017/S1754470X15000306,

available from Cambridge University Press at

[http://journals.cambridge.org/action/displayAbstract?fromPage=online  
&aid=9879072&fileId=S1754470X15000306](http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=9879072&fileId=S1754470X15000306)

**“All these negative thoughts come flooding in”: how young people with depression describe their experience of rumination**

Jeremy Oliver<sup>1,2\*</sup>, Patrick Smith<sup>1</sup>, Eleanor Leigh<sup>1</sup>

<sup>1</sup> Institute of Psychiatry, Psychology & Neuroscience, King’s College London

<sup>2</sup> Doctorate in Clinical Psychology, Royal Holloway, University of London

Word count (excluding abstract, figures, tables and references): 3,068

\*Requests for reprints should be addressed to: Jeremy Oliver, Doctorate in Clinical Psychology, Royal Holloway, University of London, Egham, TW20 0EX. (e-mail: [jeremy.oliver.2013@live.rhul.ac.uk](mailto:jeremy.oliver.2013@live.rhul.ac.uk)).

***Acknowledgements***

The authors would like to acknowledge the kind assistance given by Victoria Cole and Professor Paul Chadwick during the study.

***Financial support***

This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

***Conflict of interest***

None.

***Ethical standards***

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

## **Abstract**

Rumination, or dwelling repeatedly on negative thoughts about the past, can prolong depression and make it worse. When treating clients with depression, it can be important to consider the behavioural, cognitive and emotional impact of rumination on their life.

Previous research has examined adult experience of rumination, but the current study was the first to examine how young people with depression experience rumination. Seven young people with depression were interviewed about the cognitive content of their rumination episodes, the associated feelings, and any behavioural start and stop triggers.

Interview transcripts were analysed using Interpretative Phenomenological Analysis (IPA).

Participants reported experiencing rumination as a disorientating cognitive battle, in which they felt under attack. The process elicited sadness predominantly, but also anger and anxiety, with mood and rumination often maintaining each other. Interpersonal interaction played a key role in starting and stopping rumination episodes. CBT-based interventions specifically targeting the ruminative process may be important for young people with depression, particularly interventions which consider the impact of family members or other systemic factors on rumination behaviour.

**Keywords:** adolescent; youth; depression; rumination; interpretative phenomenological analysis (IPA); qualitative study

### **Learning objectives:**

- (1) To gain an awareness of how rumination is experienced by young people with depression.
- (2) To increase understanding of the complex interaction between thoughts, feelings and behaviours during young people's rumination episodes.
- (3) To highlight how important other people can be in prompting and ending young people's rumination episodes.
- (4) To give practitioners ideas about what to ask young people about when discussing their experience of rumination.

### **“All these negative thoughts come flooding in”: how young people with depression experience rumination**

Depression is common in adolescence. It is estimated that 11.7% of 13-18 year olds will experience a major depressive disorder before they reach adulthood (Merikangas et al., 2010). Individual CBT is recommended as a first-line treatment for moderate to severe depression in this age group (NICE, 2015). To help deliver CBT effectively, it is important to understand how young people actually experience key features of depression such as rumination. Each individual will have their own experience of rumination, but research can help elicit potential common themes to guide therapists' questions. Previous research has examined adults' experience of rumination, but the current study is the first to find out how young people with depression experience rumination and to consider how this might influence CBT in practice.

Rumination involves repetitively thinking about depressive symptoms, the cause of these symptoms and their consequences (Nolen-Hoeksema, 2004). This abstract thinking style is characterised by global 'why' questions about self-worth (Nolen-Hoeksema et al., 2008) and negative comparisons with others (Treyner et al., 2003). It is thought that rumination is used to cope with negative mood (Lyubomirsky & Nolen-Hoeksema, 1993) or when unattainable goals cannot be relinquished (Carver & Scheier, 1981).

In adults, rumination has been associated with depression both cross-sectionally (e.g. Harrington & Blakenship, 2002; Kuyken et al., 2006) and over time (e.g. Sarin et al., 2005; Spasojevic & Alloy, 2001). Whilst questionnaire-based and experimental studies are key in determining the role of rumination in the onset and maintenance of depression, it is helpful to develop a more nuanced understanding of the process using qualitative methods (Silverstein et al., 2006). Pearson, Brewin, Rhodes and McCarron (2008) interviewed chronically depressed adults about how they experienced rumination. Rumination was reported to be a complex process: usually focussed on two topics or life events; often on the

past, present and future simultaneously; associated with emotions ranging from hopelessness to feeling trapped; and typically ending through distraction. Drawing on this wealth of research into rumination in depressed adults, rumination-focused CBT has been developed (Watkins et al., 2011).

By contrast, research into rumination in young people with depression remains at an early stage. A direct association between rumination and adolescent depression has been demonstrated in cross-sectional studies, longitudinally (see: Rood et al., 2009 for a meta-analysis) and experimentally (e.g. Hilt & Pollak, 2013; Park et al., 2004). However, there have been no qualitative studies to date investigating the phenomenology of rumination in young people with depression. Given the unique cognitive, social and developmental context of adolescence, some aspects of young people with depression's experience of rumination may differ from adults. For example, adolescents' ongoing cognitive development of executive function may mean they find rumination harder to control than do adults (Blakemore & Chaudhury, 2006). As they prepare for adulthood by developing a social identity (Paus, 2005), rumination topics may be more strongly focused on interpersonal relationships. Co-rumination may occur in a different context to adults, involving close friendships (Jose et al., 2012) and families (Waller & Rose, 2010) rather than romantic relationships (Calmes & Roberts, 2008). The present study addressed these unknowns with the first exploratory investigation of the phenomenology of rumination in depressed youth.

### **Method**

#### **Participants**

Seven young people (16-18 years old,  $M = 16.85$ ,  $SD = .90$ ; 2 male, 5 female) with a primary diagnosis of depression took part in the study. They had been receiving CBT at a national and specialist mood disorder clinic in the UK for 1-13 months when interviewed ( $M = 6.14$  months,  $SD = 4.78$ ). Mood and Feelings Questionnaire (MFQ – Long; Angold &

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

Costello, 1987) scores at initial clinical assessment ranged from 19 to 53 ( $M = 33.17$ ,  $SD = 13.75$ ), indicating clinical levels of depression for the majority of participants (cut-off = 29; Daviss et al., 2006). Primary diagnoses of depression were confirmed for all participants following multi-disciplinary clinical interviews with the young person and their family as part of the initial clinical assessment. No further assessments were carried out before the study interview, but all participants remained in active CBT treatment and their therapist indicated that they still met clinical criteria for depression. Co-morbid secondary diagnoses included obsessive compulsive disorder ( $n = 2$ ), post-traumatic stress disorder ( $n = 1$ ), general anxiety disorder ( $n = 1$ ), social phobia ( $n = 1$ ) and anorexia nervosa ( $n = 1$ ). Young people with bipolar disorder, psychosis, a learning disability, or an Autism Spectrum Disorder were excluded.

Ten young people attending the clinic met eligibility criteria and were invited by their therapist to meet with a research assistant to find out more about the study. The therapist and research assistant emphasised that participation or refusal would have no impact on treatment. It was also made clear that all participants would be interviewed by the same research assistant, who was not part of their treatment team and was not known to them. Seven young people (and parents of those under 18) gave consent to participate.

### **Design**

The study used a qualitative, semi-structured interview design. The research protocol was approved by an NHS research ethics committee (12/LO/0264) and local clinical ethics bodies.

### **Interview**

In a semi-structured interview adapted from Pearson et al. (2008), the young person was asked to talk about their experience of rumination. Rumination was defined as repetitive, negative thinking when in a low mood, and this definition was written on a visible whiteboard. Participants were asked to describe rumination topics and the

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

associated emotions, sensory images and verbal thoughts. Other questions covered start and stop triggers, co-rumination experiences and the frequency and duration of rumination episodes. The interview ended with a discussion of benign topics. The interview script was amended after piloting with two young people with depression. They recommended that questions about frequency and duration of rumination episodes should be moved to the end of the interview.

### **Analysis**

Interview transcripts were anonymised with pseudonyms and then analysed using interpretative phenomenological analysis (IPA: Smith et al., 1999). IPA allows examination of the richness and diversity of participants' experience and is appropriate for a sample group of seven participants (Smith, 2004). Transcripts were analysed individually, in sequence. Emergent themes were clustered into super-ordinate, master and sub-ordinate levels. Themes were based predominantly on richness of experience and were considered fully supported if mentioned by over half of the sample (Smith, 2011).

Reliability was checked with five participants, who gave unanimous approval that the draft list of themes matched their experience. Inter-rating on 50 sample quotes was carried out between the principal researcher and two members of the research team who had not been at the interviews or seen the transcripts. All three inter-raters identified the same sub-ordinate theme on 43 out of 50 sample quotes and at least two inter-raters agreed on the remaining seven quotes.

### **Results and discussion**

Participants experienced rumination as a disorientating cognitive battle that was emotionally complex and had a significant interpersonal component. Figure 1 shows a visual summary of these themes, with example quotes. A more detailed list of themes, with numbered super-ordinate, master and sub-ordinate themes is provided in Table 1.

*[approximate location of Figure 1 and Table 1 – see final pages of this document]*

### 1. Cognitive Experience of Rumination: a Disorientating Battle

In line with findings in adult depression studies (Papageorgiou & Wells, 2003), most young people in the current study expressed a lack of confidence in their ability to fight and control rumination (1.1). Rumination was characterised as an attacking force (1.1.1). *It can be more crushing than other things (Julia, line 610). It's trying to get out of its little drawer in your head and it's really, like, disruptive (Bryony, line 1494).* The sense of uncontrollability was heightened, for some participants, by the intrusion of emotive memories (1.1.2). *And it's like, kind of, try and not push it out, but it's really hard to, like, especially with images from the past that have a kind of emotional link to you (Tim, line 157).* Positive beliefs about rumination were not endorsed, in contrast with findings for depressed adults (Watkins & Moulds, 2005).

Participants described experiencing thoughts related to the past, present and future, as shown in Table 2. Consistent with rumination models (e.g. Treynor et al., 2003) young people described these thought processes as cyclical (1.2.1) *You think 'Well there's nothing good to look back on. Is there anything good to look forward to?', and then it leads back into the other two [topics], sort of like, 'Well, everyone else is so happy, why aren't you?' (Bryony, line 223). Two months later, I might still ruminate the same subject (Samantha, line 1428).* Participants also described linear progression (1.2.2) from specific event-related thoughts to abstract and global thoughts *I think, if I feel guilty for doing something, I mean, anything, it just makes you think about everything you kind of feel guilty for (Tim, line 1137).* Overgeneralised autobiographical memory was evident, as with adult studies (e.g. Watkins & Teasdale, 2001). *I will be upset at the [exam] result and therefore angry at myself... 'If I can't do anything, why am I here? I'm worthless and useless and I have no future' (Liz, line 1126).*

*[approximate location of Table 2 - see final pages of this document]*

## 2. Emotional Experience of Rumination: A Complex Association with Mood

Participants' emotional experience of rumination was predominantly sad, with elements of anger and anxiety. Specific emotions included despair, helplessness, guilt, fear, paranoia and hatred. No positive emotions were reported.

A complex relationship between rumination and mood emerged, with some participants describing a one-way relationship (2.1) and others perceiving a feedback loop (2.2). Most young people described low mood serving as a trigger for ruminative thoughts (2.1.1), *I'll know like if I'm having a bad day, 'cause I'll just, I'll just be down. Then I'd start thinking then (Melanie, line 633)*, which is consistent with the description of rumination as a response to distress (Nolen-Hoeksema, 2004). For two participants, however, rumination pre-empted a drop in mood (2.1.2). *I'm thinking about more and more things, so it's like piling on top, so, the mood just kind of keeps going down (Liz, line 1073)*. Many participants perceived rumination and mood as having a reciprocal relationship (2.2.1). *If I dwell on, think about 'What's the point?', I know that I'll end up in a low mood. But then if I'm in a low mood, I can't help myself from what I'm doing, from like, my mind from wandering down that way and then, sort of, reinforcing the low mood (Bryony, line 677)*.

## 3. Behavioural Experience of Rumination: Other People Have Significant Impact

Interpersonal stress is known to influence both depression and rumination (Hammen, 2006; Hilt & Pollak, 2013) and ruminators' social interactions tend to be characterised by friction (Nolen-Hoeksema et al., 2008). Unsurprisingly, then, all the young people in this study reported that unhelpful conversations (3.1) initiated periods of rumination (3.1.1). *While they're shouting at me, they may say something, even sometimes insult me ...all these negative thoughts come flooding in. (Liz, line 955)*. Figure 2 summarises the main start triggers for rumination identified by participants, of which the majority were interpersonal.

*[approximate location of Figure 2 - see final pages of this document]*



## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

Most confirmed that co-rumination with others was a negative experience (3.1.2). *[My sister] was like ‘Oh, our family’s awful’...and then we both just kind of carried on talking about the past and feeling bad about it (Tim, line 919).* Most also described themselves as engaging in imagined future conversations or new versions of past conversations while ruminating (3.1.3). *You can see yourself in different scenarios...trying to go into the classroom and people’s faces or the teacher’s surprise.(Julia, line 406).* Here, the experience of rumination was suffused with worry about future events.

Many participants described actively seeking help from other people to end rumination bouts (3.2.1), which generally occurred daily and could last from five minutes to two hours. *If I start thinking negatively, like I don’t want to be around anymore, that scares me...I get up and go and tell my mum that I’m thinking like that and she’ll calm me down (Melanie, line 718).* This could be a positive strategy, but may actually reflect the dependent interpersonal style of ruminators (Nolen-Hoeksema et al., 2008), especially if help is not available (3.2.2). *I’ll think, ‘What do I do if my parents aren’t around?’, because they’ve always been there through all this, to get me through it, so I wonder ‘If they’re not there, what do I do, what happens?’ (Melanie, line 530).* Only two participants experienced rumination as a process they could end without help from others (3.2.3). *I reach like a breaking point where I’m either going to go really, really, really dark or...I’ll just sort of pick myself up again slowly (Bryony, line 931). Stepping back when I’m ruminating or something, I think that I may forget what I’m ruminating about (Sean, line 1112).* Methods used by these participants to stop rumination episodes are shown in Figure 3, along with a summary of other start and stop triggers.

*[approximate location of Figure 3 - see final pages of this document]*

### Conclusion

Overall, the young people with depression in this study reported experiencing rumination in a similar way to adults with depression. As in Pearson and colleagues’ adult

study (2008), a range of negative emotions were experienced, distraction was a stop trigger and rumination focused on distinct topics comprising worry about the future, thoughts about past events and current difficulties with depression. Participants also reported abstract, global thoughts, which have been found to affect emotional processing, problem solving and overgeneral autobiographical memory in experimental studies with adults (e.g. Watkins, 2008; Watkins & Moulds, 2005; Watkins & Teasdale, 2001).

This first indication that young people with depression may experience rumination in a broadly similar way to adults has both clinical and research implications. Abstract thinking was evident in several young people in this study, so could be targeted in psychological treatment for young people with depression, consistent with existing third-wave cognitive behavioural therapy approaches. Several participants described ruminating about the future, so it would be valuable to explore experimentally how worry and rumination, two very similar repetitive thinking processes (Watkins et al., 2005), interact in young people with depression. Developing a better understanding of the interaction between worry and rumination is particularly important because, as with the participants in this study, co-morbid anxiety disorders are prevalent in young people with depression (Garber & Weersing, 2010).

As with the adults participants in Pearson et al.'s (2008) study, most of the young people in the current study described moving and still images as a feature of their rumination episodes. Mental imagery is implicated as a maintaining factor in emotional disorders, including depression, in adults (Holmes et al., 2009; Patel et al., 2007). In young people, Meiser-Stedman et al. (2012) found that intrusive memories were common after negative events amongst secondary school students and they were associated with subsequent depressed mood. It would be valuable to further investigate the relationship between intrusive memories and rumination. New treatments for depression have been developed that target intrusive memories (Brewin et al., 2009), and it would be worthwhile

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

exploring the extent to which these treatments reduce both rumination and intrusive memories in young people.

Certain elements of young people's experience of rumination emerged as distinct from adults. There was a particularly vivid sense of being attacked by rumination, with a strong negative emotional impact. Asking questions about experiences of being overwhelmed by rumination may be particularly important when working therapeutically with depressed young people. It may be, for example, that a sense of being overwhelmed by repetitive, negative thoughts makes it hard to react appropriately to other people, contributing to irritability, an attribute associated with depression in young people (Stringaris et al., 2013). Further studies could explore whether an ability to control rumination, and so avoid being overwhelmed by it, is associated with lower levels of irritability.

The influence of other people on rumination behaviour seemed more prominent for young people in this study than for adults (Pearson et al., 2008). Questioning and discussion in treatment that pays particular attention to systemic influences may prove helpful when targeting rumination in treatment for young people with depression. In particular, therapists may wish to explore with the young person what types of interaction they have with parents and peers. Waller, Silk, Stone and Dahl (2014) found that young people with depression were more likely than healthy controls to engage peers and parents in negative co-rumination, which can extend depressive episodes. In our study, Tim succinctly described this effect. *[My sister] was like 'Oh, our family's awful'...and then we both just kind of carried on talking about the past and feeling bad about it (Tim, line 919)*. Where possible, therapists could encourage young people with depression to engage in active problem-solving with others rather than co-rumination.

The study had two main limitations. A small sample was used to allow detailed analysis of participants' experience (Smith, 2004). However, the gender and age balance of

the sample was weighted towards females and late adolescents. This reflects the sample population at the national and specialist CAMHS recruitment site, but the findings may not represent male and younger adolescents' experience of rumination. A further limitation was the length of treatment participants had received prior to interview. Some participants had received almost a full course of CBT, which includes discussions about the rumination process. For these individuals both the ruminative process and their views of it may have been altered. Future studies could recruit participants earlier in treatment and aim for a more balanced gender and age representation. Further improvements for future research might be to use diary methods to supplement retrospective interview responses and re-administer the MFQ or other formal depression measures at the start of the study to support clinical observations that the primary diagnosis on admission remained valid.

In conclusion, the present study provides rich detail about the experience of rumination amongst a small group of depressed young people. Their accounts confirm the repetitive, abstract nature of the process and point to the complex relationship rumination has with a range of emotions. The study provides new insights into the importance of the interpersonal context of rumination and the sometimes overwhelmingly negative emotions it elicits in young people with depression. These aspects now warrant further quantitative investigation with larger samples. CBT-based interventions specifically targeting the ruminative process may be important for young people with depression, particularly interventions which consider the impact of family members or other systemic factors on rumination behaviour.

### **Summary of paper**

To gain a rich understanding of the phenomenon of rumination amongst adolescents, the present study employed IPA to analyse the transcripts of interviews with seven depressed young people. As a first step in mapping the territory of an under-researched area such as rumination in youth, qualitative methods are useful. The main

themes that emerged from the current analysis were that participants experienced rumination as a disorientating cognitive battle; it was perceived to be emotionally complex; and the process was influenced strongly by other people. Interpersonal interaction played a key role in starting and stopping rumination episodes. CBT-based interventions for young people with depression may benefit from a focus on rumination and the effect other people have on starting or stopping a rumination episode.

### **Suggestions for further reading**

Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination.

*Perspectives on Psychological Science*, 3, 400-424.

Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological

analysis and its contribution to qualitative research in psychology. *Qualitative*

*Research in Psychology*, 1, 39-54.

Watkins, E. R. (2008). Constructive and unconstructive repetitive thought. *Psychological*

*Bulletin*, 134(2), 163-206.

### **References**

Angold, A., & Costello, E. J. (1987). *Mood and feelings questionnaire (MFQ)*. Durham:

Developmental Epidemiology Program, Duke University.

Blakemore, S. J., & Choudhury, S. (2006). Development of the adolescent brain:

implications for executive function and social cognition. *Journal of Child Psychology and Psychiatry*, 47(3-4), 296-312.

Brewin, C. R., Wheatley, J., Patel, T., Fearon, P., Hackmann, A., Wells, A., Fisher, P., &

Myers, S. (2009). Imagery rescripting as a brief stand-alone treatment for depressed patients with intrusive memories. *Behaviour Research and Therapy*, 47, 569-576.

Calmes, C. A., & Roberts, J. E. (2008). Rumination in interpersonal relationships: does co-

rumination explain gender differences in emotional distress and relationship

satisfaction among college students? *Cognitive Therapy and Research*, 32, 577-590.

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

- Carver, C. S., & Scheier, M. E. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer-Verlag.
- Daviss, W., Birmaher, B., Melhem, N. A., Axelson, D. A., Michaels, S. M., & Brent, D. A. (2006). Criterion validity of the Mood and Feelings Questionnaire for depressive episodes in clinic and non-clinic subjects. *Journal of Child Psychology and Psychiatry*, 47(9), 927-934.
- Garber, J., & Weersing, V. R. (2010). Comorbidity of anxiety and depression in youth: implications for treatment and prevention. *Clinical Psychology*, 17(4), 293-306.
- Hammen, C. (2006). Stress generation in depression: Reflections on origins, research, and future directions. *Journal of Clinical Psychology*, 62(9), 1065-1082.
- Harrington, J. A., & Blankenship, V. (2002). Ruminative thoughts and their relation to depression and anxiety. *Journal of Applied Social Psychology*, 32, 465-485.
- Hilt, L. M., & Pollak, S. D. (2013). Characterizing the ruminative process in young adolescents. *Journal of Clinical Child & Adolescent Psychology*, 42, 519-530.
- Holmes, E. A., Lang, T. J., & Deerpse, C. (2009). Mental imagery and emotion in treatment across disorders: Using the example of depression. *Cognitive Behaviour Therapy*, 38(S1), 21-28.
- Jose, P. E., Wilkins, H., & Spindelov, J. S. (2012). Does social anxiety predict rumination and co-rumination among adolescents? *Journal of Clinical Child & Adolescent Psychology*, 41, 86-91.
- Kuyken, W., Watkins, E., Holden, E., & Cook, W. (2006). Rumination in adolescents at risk for depression. *Journal of Affective Disorders*, 96, 39-47.
- Lyubomirsky, S., & Nolen-Hoeksema, S. (1993). Self-perpetuating properties of dysphoric rumination. *Journal of Personality and Social Psychology*, 65, 339-349.

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

- Meiser-Stedman, R., Dalgleish, T., Yule, W., & Smith, P. A. (2012). Intrusive memories and depression following recent non-traumatic negative. *Journal of Affective Disorders, 137*, 70-78.
- Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... & Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: results from the National Comorbidity Survey Replication–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry, 49*(10), 980-989.
- NICE (2015). *Depression in children and young people. identification and management in primary, community and secondary care*. London: National Institute for Health and Care Excellence.
- Nolen-Hoeksema, S. (2004). The response styles theory. In C. Papageorgiou & A. Wells (Eds.). *Depressive rumination: nature, theory and treatment* (pp. 107-124). New York: Wiley.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science, 3*, 400-424.
- Papageorgiou, C., & Wells, A. (2003). An empirical test of a clinical metacognitive model of rumination and depression. *Cognitive Therapy and Research, 27*(3), 261-273.
- Park, R. J., Goodyer, I. M., & Teasdale, J. D. (2004). Effects of induced rumination and distraction on mood and overgeneral autobiographical memory in adolescent Major Depressive Disorder and controls. *Journal of Child Psychology and Psychiatry, 45*, 996-1006.
- Patel, T., Brewin, C. R., Wheatley, J., Wells, A., Fisher, P., & Myers, S. (2007). Intrusive images and memories in major depression. *Behaviour Research and Therapy, 45*(11), 2573-2580.

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

Paus, T. (2005). Mapping brain maturation and cognitive development during adolescence.

*Trends in Cognitive Sciences*, 9, 60-68.

Pearson, M., Brewin, C. R., Rhodes, J., & McCarron, G. (2008). Frequency and nature of rumination in chronic depression: a preliminary study. *Cognitive Behaviour Therapy*, 37, 160-168.

Rood, L., Roelofs, J., Bögels, S. M., Nolen-Hoeksema, S., & Schouten, E. (2009). The influence of emotion-focused rumination and distraction on depressive symptoms in non-clinical youth: A meta-analytic review. *Clinical Psychology Review*, 29(7), 609-616.

Sarin, S., Abela, J. R. Z., & Auerbach, R. P. (2005). The response styles theory of depression: a test of specificity and causal mediation. *Cognition & Emotion*, 19, 751-761.

Silverstein, L. B., Auerbach, C. F., & Levant, R. F. (2006). Using qualitative research to strengthen clinical practice. *Professional Psychology: Research and Practice*, 37, 351-358.

Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative Research in Psychology*, 1, 39-54.

Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological analysis. *Health Psychology Review*, 5, 9-27.

Smith, J.A., Jarman, M., & Osborn, M. (1999). Doing Interpretative phenomenological analysis. In M. Murray and K. Chamberlain (Eds). *Qualitative health psychology: theories and methods*. London: Sage.

Spasojevic, J., & Alloy, L. B. (2001). Rumination as a common mechanism relating depressive risk to depression. *Emotion*, 1, 25-37.



## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

Stringaris, A., Maughan, B., Copeland, W. S., Costello, E. J., & Angold, A. (2013).

Irritable mood as a symptom of depression in youth: prevalence, developmental, and clinical correlates in the Great Smoky Mountains Study. *Journal of the American Academy Of Child & Adolescent Psychiatry*, 52(8), 831-840.

Treynor, W., Gonzalez, R., Nolen-Hoeksema, S. (2003). Rumination reconsidered: a psychometric analysis. *Cognitive Therapy and Research*, 27, 247–259.

Waller, E. M., & Rose, A. J. (2010). Adjustment trade-offs of co-rumination in mother-adolescent relationships. *Journal of Adolescence*, 33, 487-497.

Waller, J. M., Silk, J. S., Stone, L. B., & Dahl, R. E. (2014). Co-rumination and co–problem solving in the daily lives of adolescents with Major Depressive Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 53(8), 869-878.

Watkins, E. R. (2008). Constructive and unconstructive repetitive thought. *Psychological Bulletin*, 134(2), 163-206.

Watkins, E., & Moulds, M. (2005). Distinct modes of ruminative self-focus: impact of abstract versus concrete rumination on problem solving in depression. *Emotion*, 5(3), 319-328.

Watkins, E., Moulds, M., & Mackintosh, B. (2005). Comparisons between rumination and worry in a non-clinical population. *Behaviour Research and Therapy*, 43(12), 1577-1585.

Watkins, E. R., Mullan, E., Wingrove, J., Rimes, K., Steiner, H., Bathurst, N., Eastman, R., & Scott, J. (2011). Rumination-focused cognitive-behavioural therapy for residual depression: phase II randomised control trial. *The British Journal of Psychiatry*, 199, 317-322.

Watkins, E., & Teasdale, J. D. (2001). Rumination and overgeneral memory in depression: effects of self-focus and analytic thinking. *Journal of Abnormal Psychology*, 110(2), 353.

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

Table 1.

*How young people with depression describe their experience of rumination – numbered themes*

Themes: super-ordinate (x.) , master (x.x) and sub-ordinate (x.x.x)		No. of participants
1.	Cognitive experience: a disorientating battle	6
1.1	Hard to fight	6
1.1.1.	Attacking	5
1.1.2	<i>Intrusive*</i>	3
1.2	Multidirectional	6
1.2.1	Circular	6
1.2.2	Linear	4
2.	Emotional experience: a complex association with mood	7
2.1	One-way	7
2.1.1	Mood drives rumination	7
2.1.2	<i>Rumination drives mood*</i>	3
2.2	Two-way	5
2.2.1	Reciprocal	5
3.	Behavioural experience: other people have significant impact	7
3.1	Unhelpful interaction	7
3.1.1	Interpersonal triggers	7
3.1.2	Co-rumination	5
3.1.3	Imagined	5
3.2	Helpful interaction	4
3.2.1	Seeking help	4
3.2.2	<i>Not getting help*</i>	2
3.2.3	<i>Not needing help*</i>	2

\*Note: italicised themes were mentioned by less than half the participants, so are not considered fully supported (Smith, 2011)

*Table 2.*  
Overview of individual participants' cognitive experience of rumination

Participant	Main three topics of rumination	Frame of reference			Form of thoughts
		Social	Temporal		
Bryony	Comparison of self to other people Do I matter? Fragility of happiness, endurance of sadness	Interpersonal	Present	Verbal	Verbal, Moving images (neighbour mowing)
		Personal	Present	Verbal	Verbal
		Abstract	Present	Verbal	Verbal
Julia	Better ways to have behaved at social events How schoolfriends will react to my low mood Why am I here?	Interpersonal	Past	Verbal, Moving images (past social events)	Verbal, Moving images (past social events)
		Interpersonal	Future	Verbal, Still images (classroom and friends' faces)	Verbal, Still images (classroom and friends' faces)
		Personal	Present	Verbal, Sounds (unidentifiable)	Verbal, Sounds (unidentifiable)
Liz	Worthiness to be alive Things I don't like about myself Why am I here?	Personal	Present	Verbal	Verbal
		Personal	Present	Verbal	Verbal
		Personal	Present	Verbal, Still images (future without me)	Verbal, Still images (future without me)
Melanie	How will I handle my depression alone? Fear of being alone When I got ill last year	Interpersonal	Future	Verbal	Verbal
		Interpersonal	Future	Verbal	Verbal
		Personal	Past	Still images (hospital)	Still images (hospital)
Samantha	Disagreements with parents Relationships with other people Effect cannabis has on me and my finances	Interpersonal	Past/Present	Verbal, Moving images ( family)	Verbal, Moving images ( family)
		Interpersonal	Present	Still images (friends)	Still images (friends)
		Personal	Present	Moving images, Sounds (past drug highs)	Moving images, Sounds (past drug highs)
Sean	Academic inadequacy How badly I speak, look and convey myself How to manage romantic relationships	Personal	Present	Verbal, Still images (friends' future success)	Verbal, Still images (friends' future success)
		Interpersonal	Present	Verbal, Moving images (interacting optimally)	Verbal, Moving images (interacting optimally)
		Interpersonal	Future	Cannot say (more a sense of fear)	Cannot say (more a sense of fear)
Tim	Fear that past events will repeat and harm family Getting revenge on other people Past events I wish I could have changed	Interpersonal	Past/Future	Moving images (family being harmed)	Moving images (family being harmed)
		Interpersonal	Future	Moving images (hurting others)	Moving images (hurting others)
		Personal	Past/Present	Still images (past life events)	Still images (past life events)

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION

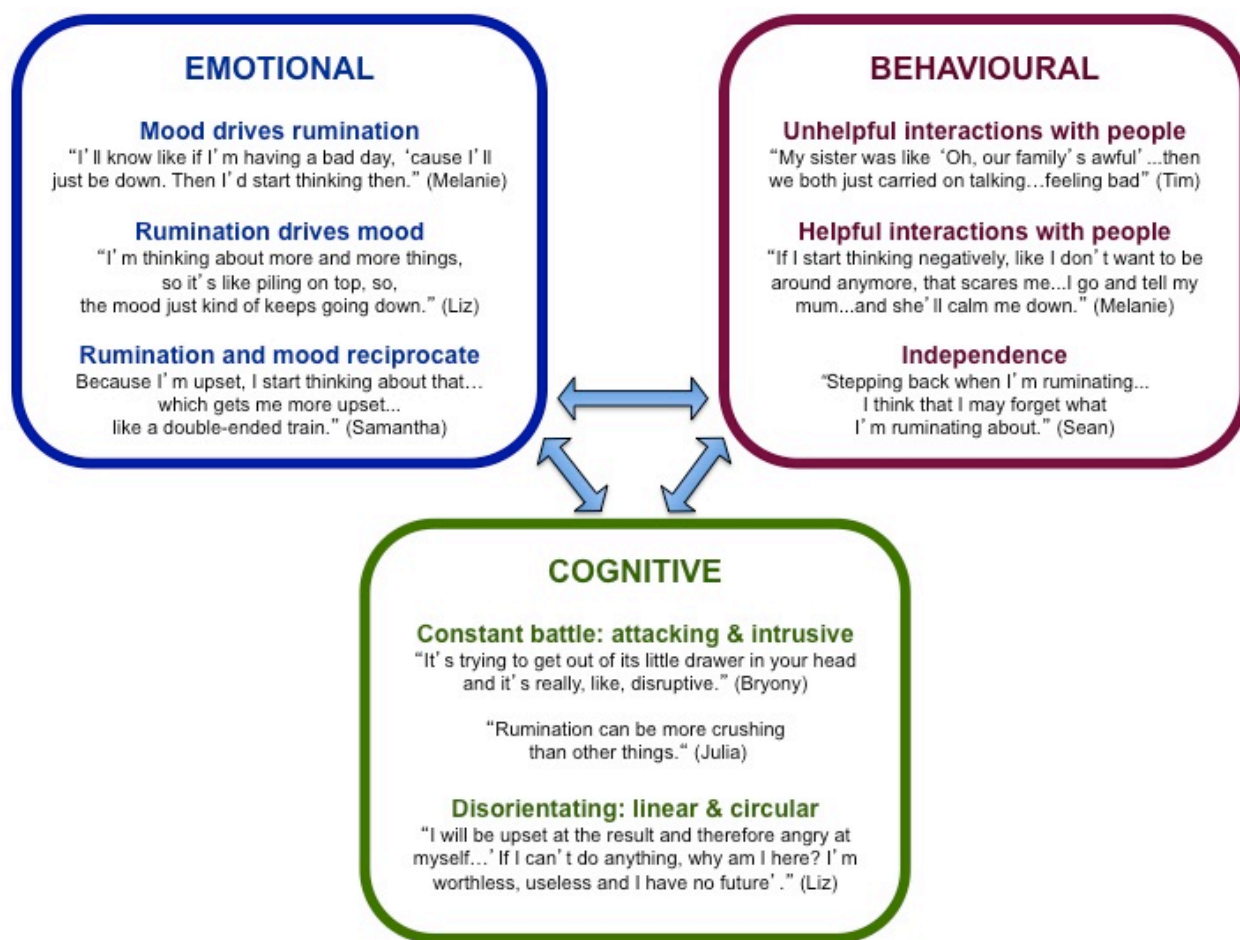
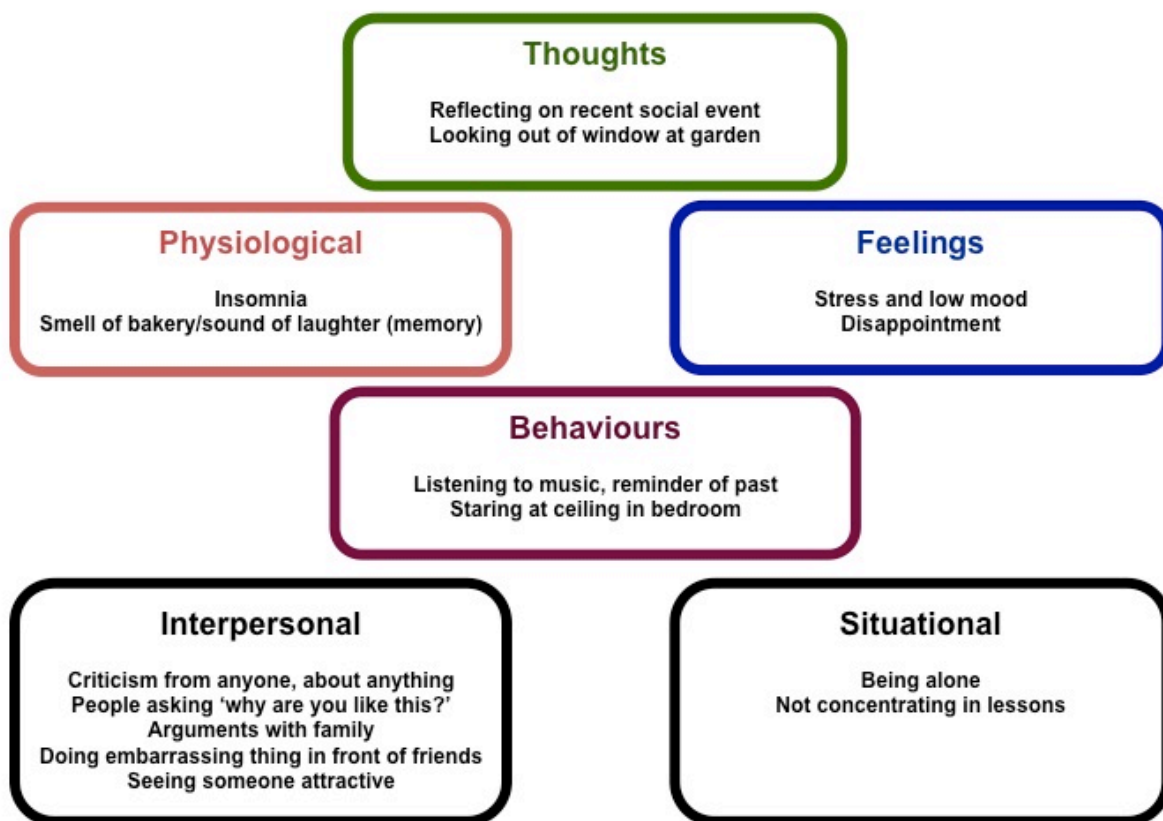


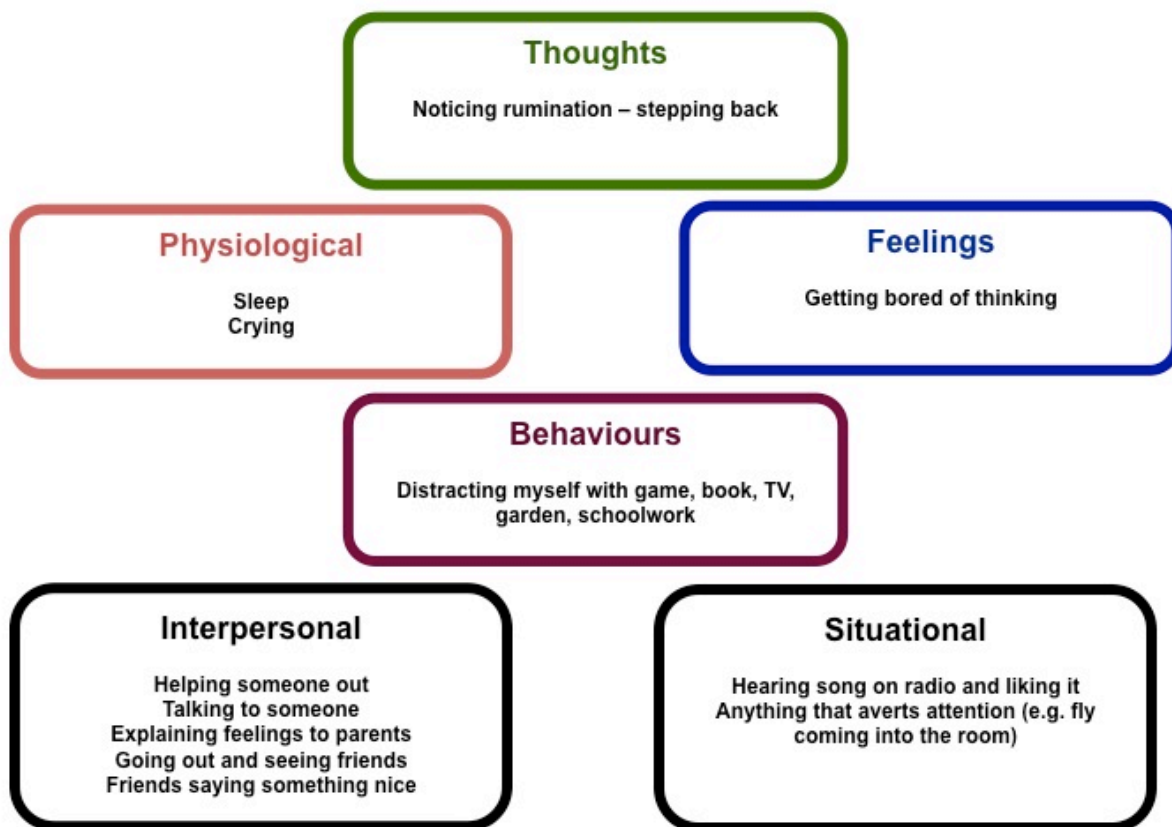
Figure 1. How young people with depression describe their experience of rumination – summary of themes.

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION



*Figure 2. Start triggers for rumination*

## RUMINATION IN YOUNG PEOPLE WITH DEPRESSION



*Figure 3. Stop triggers for rumination*